Exhibit 3
DirecTV 1994 Report

Terrestrial Interference in the DBS Downlink Band

An Analysis
Submitted to the
Federal Communications Commission
April 11, 1994

by

DIRECTV™
2230 E. Imperial Highway
El Segundo, CA 90245

Table of Contents

List of Figures and Tables

Glossary

C/I	Carrier power to interference power (ratio)
C/N	Carrier power to noise power (ratio)
Crane model	Mathematical model, due to Crane, of rain induced degradations in microwave communications links
DBS	Direct Broadcast Satellite
DIRECTV™	Direct-to-home television service of DIRECTV, Inc., a unit of GM Hughes Electronics
Downlink	Space-to-ground transmission
DSS™	The subscriber electronics designed to receive DBS signals from the 101°W satellites. A trademark of GM Hughes Electronics
EIRP	Effective Isotropic Radiated Power
HCG	Hughes Communications Galaxy, Inc., an affiliate of DIRECTV, and the licensee for the DBS satellite operated by DIRECTV
LNB	Low Noise Block frequency downconverter
Microwave route	A two-way microwave radio path with one or more radios in each direction
QPSK	Quadrature Phase Shift Keying, the type of modulation used in the 101°W DBS transmissions
USSB	United States Satellite Broadcasting, licensee for a five-transponder DBS payload at 101°W

TERRESTRIAL INTERFERENCE IN THE DBS DOWNLINK BAND

1.0 INTRODUCTION

1.1 Background

In 1982 the Federal Communications Commission (FCC) issued new regulations for the band 12.2-12.7 GHz establishing Direct Broadcast Satellite (DBS) reception as the Primary service and terrestrial radio as the Secondary service. This year two DBS companies, DIRECTV and United States Satellite Broadcasting, will offer the nation's first high-powered DBS services using geosynchronous satellites at 101°W longitude. DIRECTV's affiliate, Hughes Communications Galaxy, Inc. (HCG), is the licensee for the DBS frequencies that DIRECTV will use to provide its multichannel video subscription service. The first DBS satellite was launched on December 17, 1993, and is already operational. The second DBS satellite will be launched in July '94. With its full complement of programming nearly complete, DIRECTV expects to offer shortly a state-of-the-art video service that will be the nation's first real alternative to cable programming.

Although DBS was designated as the Primary service in the 12.2-12.7 GHz band over ten years ago, analysis of the band indicates that over 500 terrestrial microwave routes are still currently licensed in the DBS downlink band. Field experiments indicate that these existing terrestrial radios may interfere dramatically with DBS reception, and in many cases may block completely the reception of DBS signals over extremely large areas. Because these terrestrial radios operate on a Secondary basis in the DBS downlink band, they must accommodate the DBS signals.

1.2 Document Purpose

This document provides a summary of the interference environment created by the continued use of terrestrial radios in the DBS downlink band. The document is intended for use by the FCC and users of the 12.2-12.7 GHz band in establishing a working policy on resolving interference to the DBS services which will become operational in 1994.

1.3 Document Overview

The document covers a variety of topics including the following:

- DBS Receiver Characteristics
- Terrestrial Interferer Characteristics
- Interference Analysis
- Interference Experiments
- DIRECTV Literature

1.4 Conclusions

- Over 500 terrestrial microwave routes are currently licensed in the DBS downlink band.
- A single terrestrial radio can interfere with three or more DBS digital signals. Each DBS transponder carries up to eight digital television channels.
- A typical interfering terrestrial signal can preclude reception from one or more DBS transponders over an area from 70 square kilometers up to 250 square kilometers.
- In an experiment in Los Angeles using the on-orbit DBS-1 satellite, a single existing terrestrial signal was shown to disrupt DBS reception by a potential audience of **15,000 homes**.
- Given the consumer-oriented nature of DBS, no practical means is available to ameliorate the interference into a DBS receiver.
- It is expected that one million DBS receivers will be installed nationwide by April 1995.
- Given their interference potential and the fact that terrestrial use has been on a secondary basis since 1983, all terrestrial radios in the band 12.2-12.7 GHz may have to be required to cease emissions by the end of 1994.

2.0 DBS RECEIVER CHARACTERISTICS

2.1 Transmission Overview

The broadcast satellite configuration at 101°W longitude will employ two collocated satellites of the type illustrated in Figure 2.1-1. The satellites will provide 32 transponders with coverage of the continental United States, 16 transponders on each satellite. Twenty-seven of these transponders are licensed to DIRECTV's affiliate HCG. Five comprise a payload that is licensed to USSB. The satellites utilize the 12.2 to 12.7 GHz downlink band as shown in the Figure 2.1-2.

The satellite antenna shaped beam provides EIRP coverage of the contiguous United States ranging from 49 dBW in the West to 54 dBW in the Southeast. Each transponder transmits one QPSK modulated 40 Mbps signal in a bandwidth of 24 MHz. Each QPSK carrier is modulated with a time division multiplex of compressed video and audio, data and forward error correction parity bits. 49 to 54 dBW

The DBS subscriber antenna is typically an 18 inch aperture offset parabolic reflector with a feed horn. It receives the satellite signals between 12.2 and 12.7 GHz and provides a downconverted spectrum between 950 and 1450

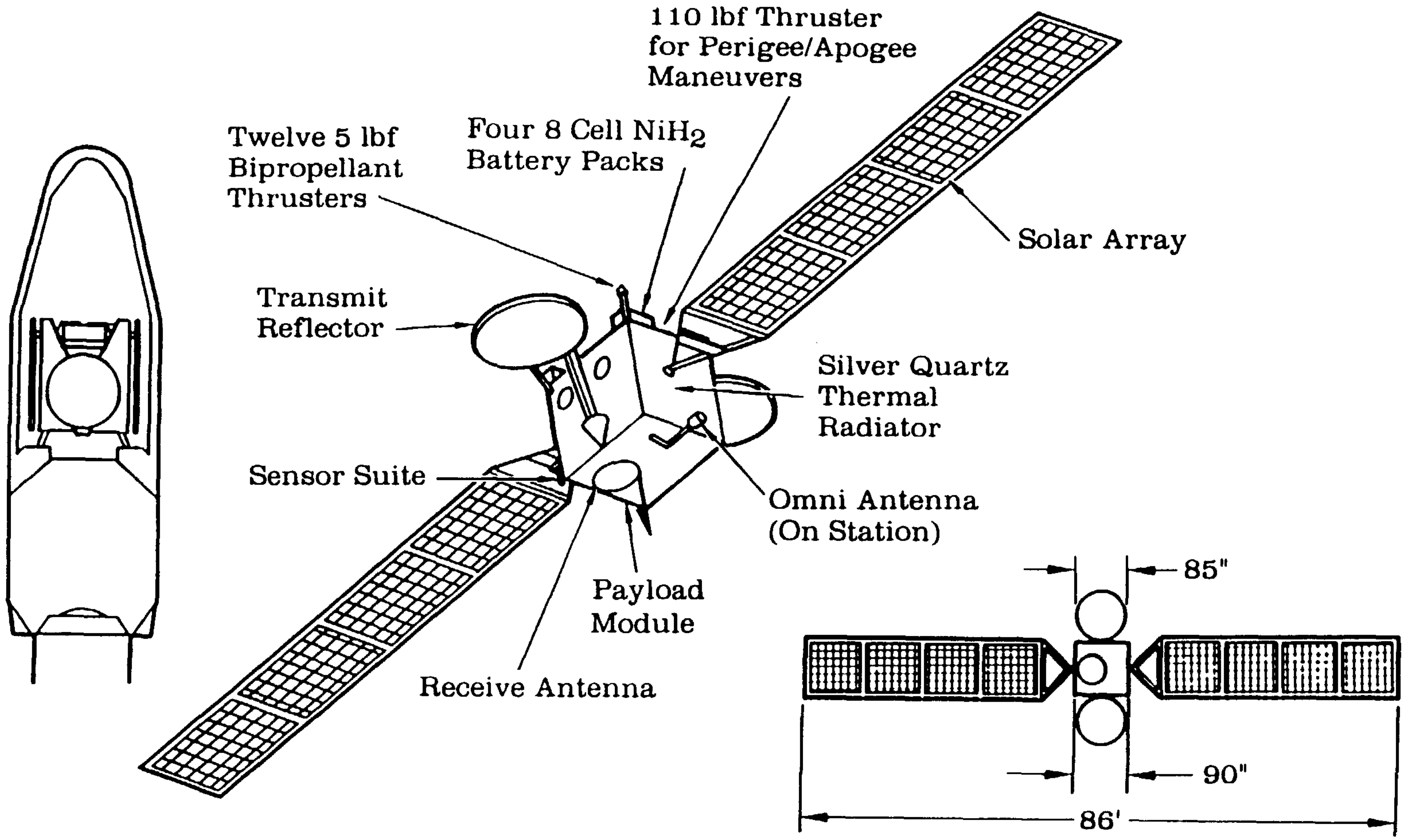


Figure 2.1-1 DBS Satellite

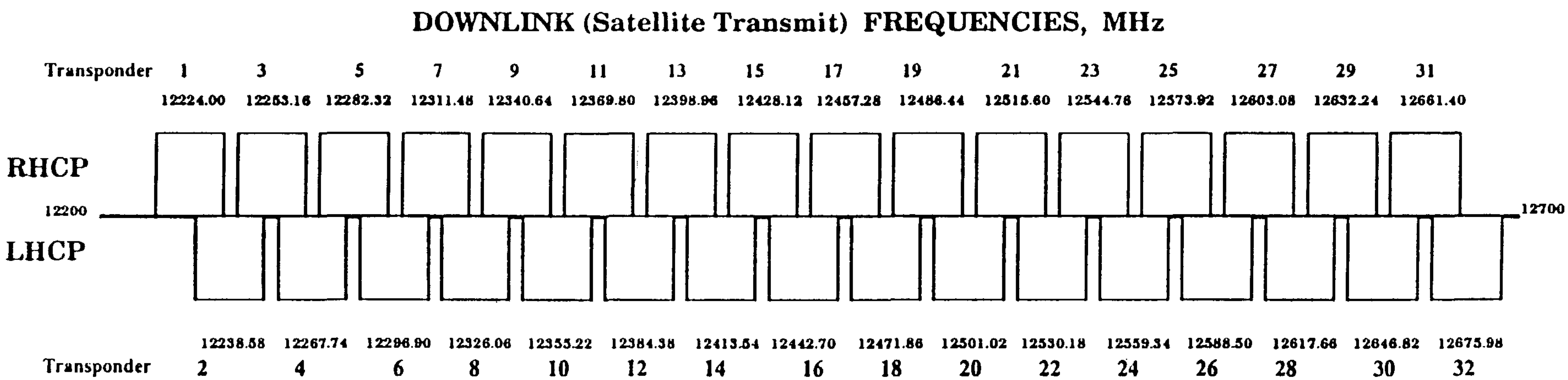


Figure 2.1-2 DBS Satellite Frequency and Polarization Plan

MHz to an integrated receiver decoder (IRD). The IRD tunes and demodulates a single QPSK carrier and provides a high quality single channel of video to a standard NTSC television set. The IRD provides a high quality video signal when the received carrier to noise and interference ratio is greater than 8 dB.

Figure 2.1-3 is a photo of the RCA-brand DBS subscriber equipment which will go on sale in the second quarter of 1994. This equipment will be mass marketed in consumer electronics stores and will be capable of customer installation. The term Digital Satellite System (DSS™) refers to the subscriber electronics designed to receive from the 101°W direct broadcast satellites. The DSS™ designation is a trademark of GM Hughes Electronics.

2.2 Transmission Link Design

The satellite EIRP is shaped in accordance with regional rain climate zones, as shown in Figure 2.2-1. The design provides an availability in all areas of the U.S. better than 99.7% (as calculated by the Crane global rain model.) An availability of 99.7% is equivalent to an unavailability of .3% or 26 hours per year.

Severe rain attenuation or interference will cause loss of picture. This will occur at carrier to noise plus interference ratios below 5 to 8 dB. The exact threshold point depends on the particular hardware's performance and mode of operation.

Table 2.2-1 presents transmission link budgets for Los Angeles, Chicago and Miami.

Table 2.2-1 DBS Transmission Link Budgets

Los Angeles Downlink:	Clear	Rain, 99.9% Availability	
Satellite EIRP, dBW	50.0	50.0	
Downlink Path Loss, dB	-205.9	-205.9	
Atmospheric Loss, dB	-0.1	-0.1	
Downlink Rain Loss, dB	0.0	-1.1	
Rain Temp Increase, dB	0.0	-1.7	
Pointing Loss, dB	-0.3	-0.3	
Ground G/T, dB/K	13.0	13.0	
Bandwidth, dB-Hz	-73.8	-73.8	
Boltzmann's constant, dBW/Hz-K	228.6	228.6	
Downlink C/N (Thermal), dB	11.5	8.7	
Totals:			
Downlink C/N (thermal), dB	11.5	8.7	
Uplink C/N (thermal), dB	25	25	
Crosspol Interference, dB	25	25	
Adjacent Satellite Interference, dB	25	25	
Terrestrial Interference, dB	variable	variable	
Total C/(N+I), dB	**11.0**	**8.4**	0.3
Required C/(N+I), dB	8	8	

Table 2.2-1 continued. DBS Transmission Link Budgets

Chicago Downlink:	Clear	Rain, 99.8% Availability	
Satellite EIRP, dBW	51.0	51.0	
Downlink Path Loss, dB	-205.9	-205.9	
Atmospheric Loss, dB	-0.1	-0.1	
Downlink Rain Loss, dB	0.0	-1.6	
Rain Temp Increase, dB	0.0	-2.2	
Pointing Loss, dB	-0.3	-0.3	
Ground G/T, dB/K	13.0	13.0	
Bandwidth, dB-Hz	-73.8	-73.8	
Boltzmann's constant, dBW/Hz-K	228.6	228.6	
Downlink C/N (Thermal), dB	12.5	8.7	
Totals:			
Downlink C/N (thermal), dB	12.5	8.7	
Uplink C/N (thermal), dB	25	25	
Crosspol Interference, dB	25	25	
Adjacent Satellite Interference, dB	25	25	
Terrestrial Interference, dB	variable	variable	
Total C/(N+I), dB	**11.8**	**8.4**	3.4
Required C/(N+I), dB	**8**	**8**	

Miami Downlink:	Clear	Rain, 99.7% Availability	
Satellite EIRP, dBW	54.0	54.0	
Downlink Path Loss, dB	-205.7	-205.7	
Atmospheric Loss, dB	-0.1	-0.1	
Downlink Rain Loss, dB	0.0	-3.8	
Rain Temp Increase, dB	0.0	-3.5	
Pointing Loss, dB	-0.3	-0.3	
Ground G/T, dB/K	13.0	13.0	
Bandwidth, dB-Hz	-73.8	-73.8	
Boltzmann's constant, dBW/Hz-K	228.6	228.6	
Downlink C/N (Thermal), dB	14.5	8.4	
Totals:			
Downlink C/N (thermal), dB	14.5	8.4	
Uplink C/N (thermal), dB	25	25	
Crosspol Interference, dB	25	25	
Adjacent Satellite Interference, dB	25	25	
Terrestrial Interference, dB	variable	variable	5.1
Total C/(N+I), dB	**13.5**	**8.1**	
Required C/(N+I), dB	**8**	**8**	

2.3 Subscriber Antenna Characteristics

Figure 2.3-1 shows the gain characteristic of a typical offset parabolic consumer antenna. The peak gain is 34 dB. Figure 2.3-2 shows the gain of the same antenna toward the horizon when the peak gain is in the direction of a 40° elevation angle. The gain varies from -34 dB to -50 dB relative to

Figure 2.1-3 RCA-brand DSS™

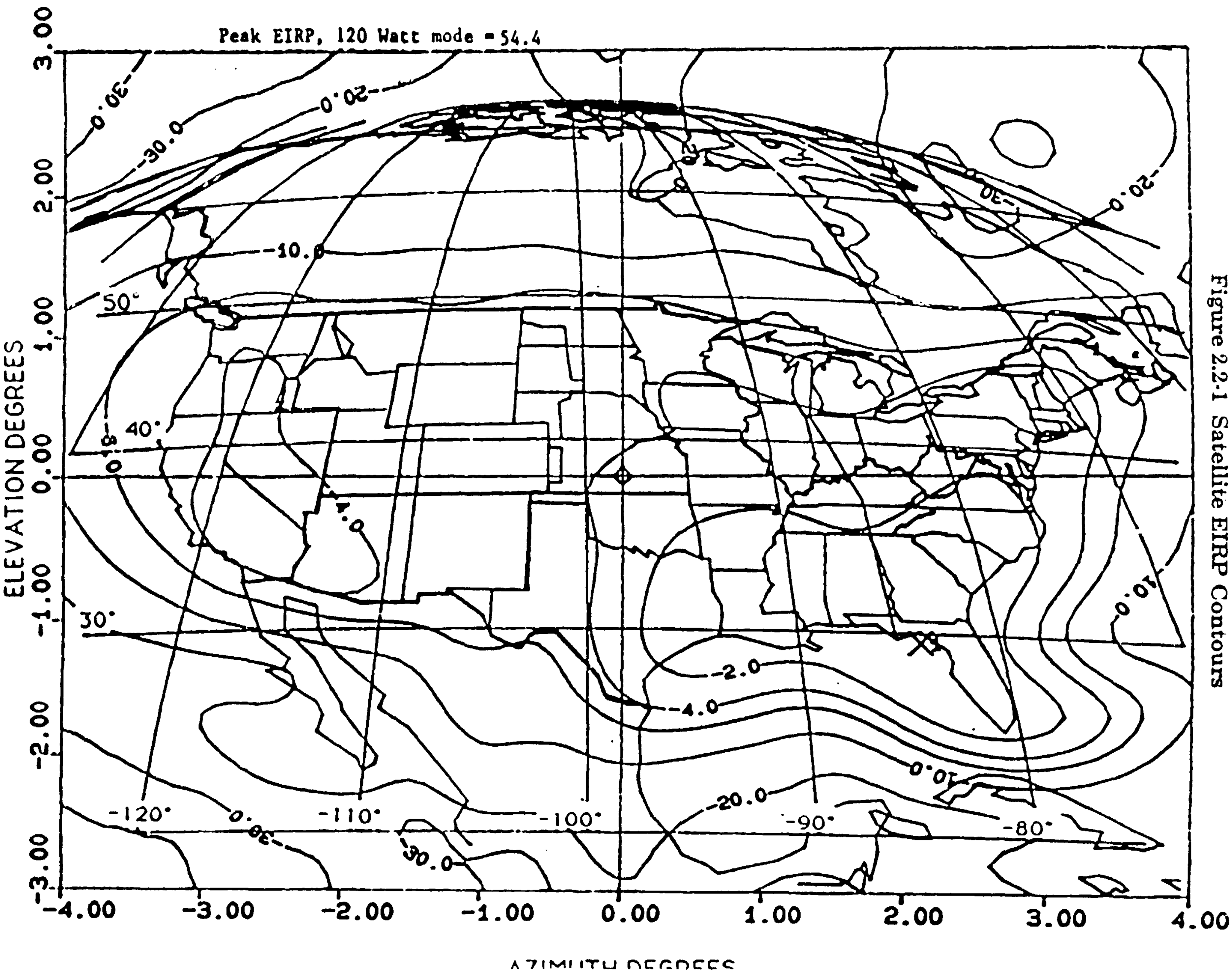


Figure 2.2.1 Satellite EIRP Contours

CHANNEL MASTER
ANTENNA LABORATORY

Figure 2.3-1
Gain characteristic of offset parabolic consumer antenna for DBS, peak gain = 34 dB

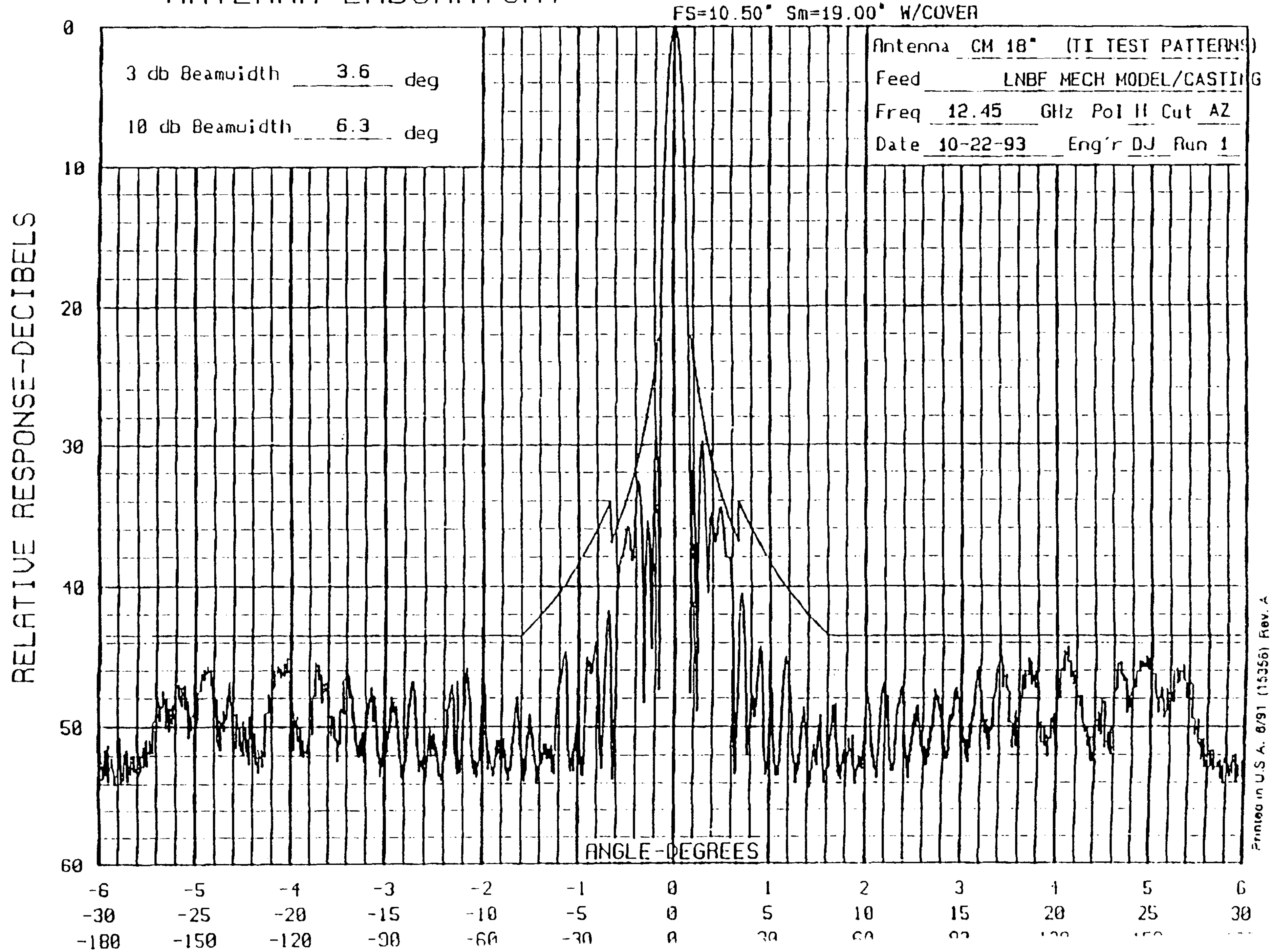
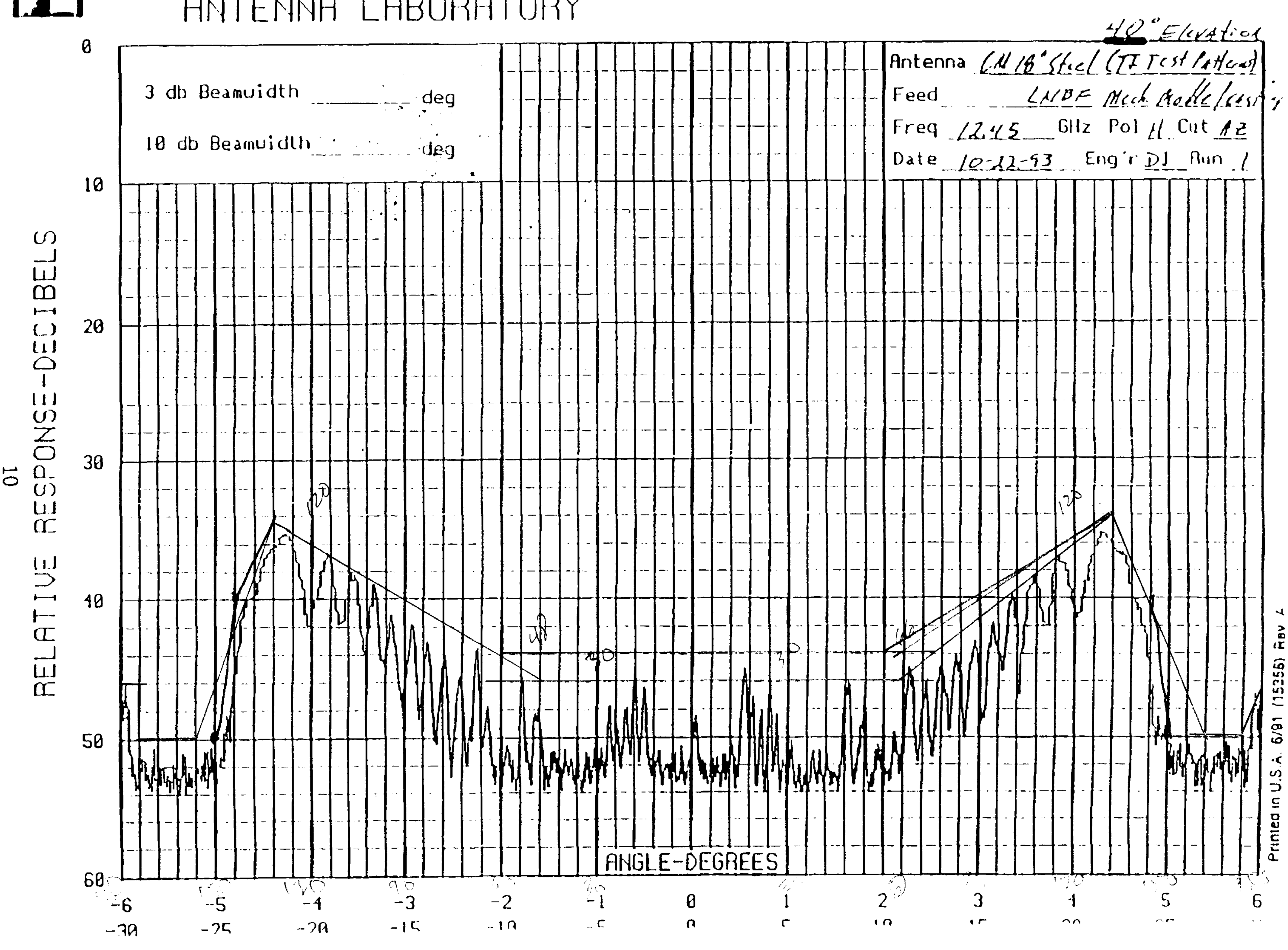


Figure 2.3-2
Horizon gain characteristic of offset parabolic consumer antenna for DBS, peak gain = 34 dB

CHANNEL MASTER
ANTENNA LABORATORY



10

peak gain, or in absolute gain, from 0 dB to -14 dB. This horizon gain characteristic is substantially unchanged for beam peak orientations between elevation angles of 20° to 50°.

2.4 Interference Criteria

Interference from terrestrial sources may result in a complete loss of reception from one or more satellite transponders or in a substantial reduction in transmission link availability. These two cases have different interference criteria. Figure 2.4-1 illustrates interference into three transponders with the resultant loss of up to 24 video channels. Because each transponder carries up to 8 video channels as digital information in a single time-division-multiplexed signal, interference into part of a transponder will result in the loss of all video channels carried on that transonder.

A complete loss of video transmission, "Case A," will result when the interfering sources produce power levels that approach 10 dB below that of the desired satellite transponder signals at the LNB input.

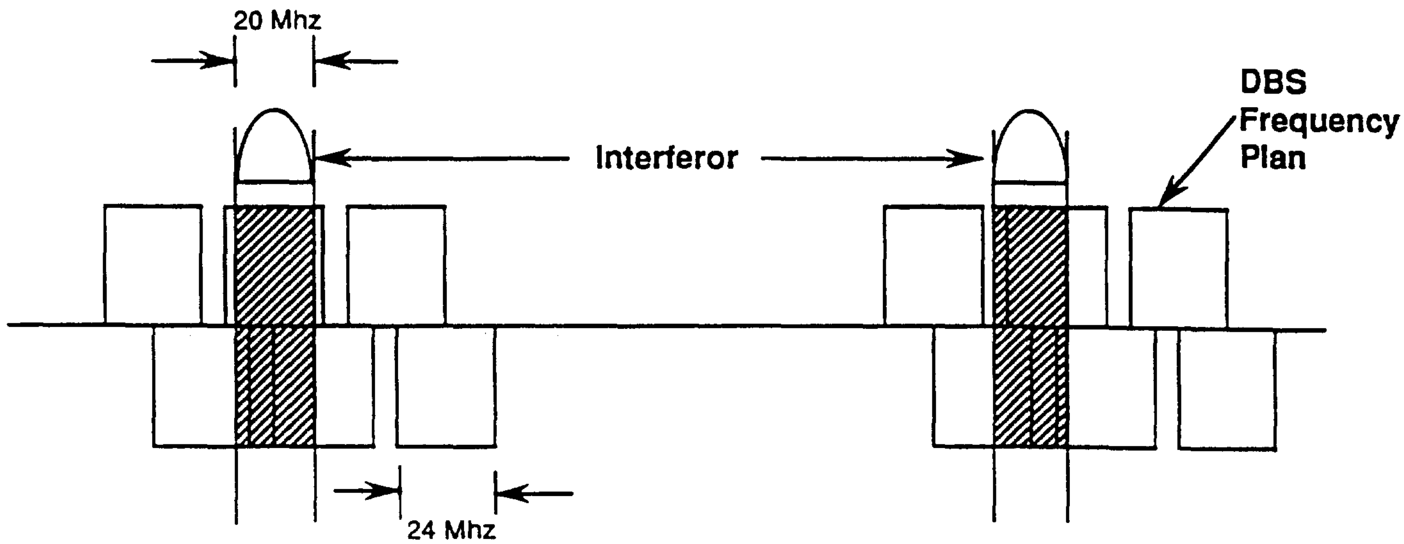
LNB = DCon.

In "Case B," terrestrial interference will result in reduced carrier to noise signal quality of received DBS transmissions during clear weather. While a subscriber will not notice any changes in video quality during clear weather, reduced carrier to noise levels will result in less margin to accommodate severe rain attenuation events. The advanced digital signal modulation and coding thus "disguises" the presence of interference until another degradation occurs such as heavy rainfall. For example, in the absence of terrestrial interference a subscriber could receive transmissions during a rain storm averaging rain rates of one inch per hour, but in the presence of interference the subscriber could lose transmission when the rain rate exceeds one half inch per hour.

The interference criteria for Case A, "total loss of signal," and for Case B, "increase in outage," also vary slightly in different areas of the country. This variation is due to a variation in DBS clear weather margins across the U.S. Due to reduced rain attenuation susceptibility and hence lower clear sky margins in the western U.S., relative to the eastern U.S., western locations will be more susceptible to terrestrial interference in the DBS downlink band. The DBS link design variations are given in Table 2.2-1. The resultant interference cases are shown in the figures in paragraph 4.1.

Note that very high interference levels will saturate the DBS receiver and preclude reception of all television channels. This will happen when a DBS receiver is within 500 meters of the direct line of sight of a 1 watt terrestrial transmitter with a 6 foot antenna, and is likely to happen when a DBS receiver is within 3 km (2 miles) of a 1 watt interfering transmitter with a 6 foot antenna.

Figure 2.4-1 Interferor/DBS Signal Spectral Overlap



No polarization isolation with respect to interferor

3.0 TERRESTRIAL INTERFERER CHARACTERISTICS

3.1 Summary of Current User Networks

Table 3.1-1 summarizes the current terrestrial networks in the 12.2-12.7 GHz band. This summary is based on a data base from Comsearch which was derived from licensing information. DIRECTV has confirmed much of the data by correspondence with the licensees.

Table 3.1-1 indicates that 187 different organizations have licenses for over 500 different "routes." A route is a two-way microwave path with one or more radios licensed for each direction.

The "governmental" category includes local, county and state agencies. The "educational/religious" category, 25% of the total, consists primarily of colleges, universities and church organizations. The "business" category includes all other licensees.

The 16 largest user networks constitute 33% of the total routes. Figure 3.1-1 illustrates the geographic distribution of the 500-odd terrestrial routes currently licensed. Nearly 60% occur in only six states. No licenses are held currently in six other states.

3.2 Typical Technical Characteristics

3.2.1 Frequency Plan and Emission Characteristics

Terrestrial transmission center frequencies are in 20 MHz intervals between 12210 MHz and 12690 MHz. Some transmissions are at even tens of MHz intervals at spacings of 20 MHz between 12220 and 12680 MHz. Most transmissions occupy a bandwidth of 20 MHz. Table 3.2-1 lists the emission characteristics of the largest 13 networks.

Table 3.1-1 Summary of Terrestrial Users

Totals		
Organizations (licensees)	187	
Routes	516	
Types of Organizations		
Government	18%	
Educational/Religious	25%	
Business	57%	
Routes Per Organization		
Typical	5	(e.g., Kirkland Comm. College, Roscommon, MI)
Maximum	26	(e.g., Oklahoma State Regents, Oklahoma City, OK)
Concentration in 16 largest Networks	33% of routes	

Figure 3.1-1 Geographic Distribution of Terrestrial Routes

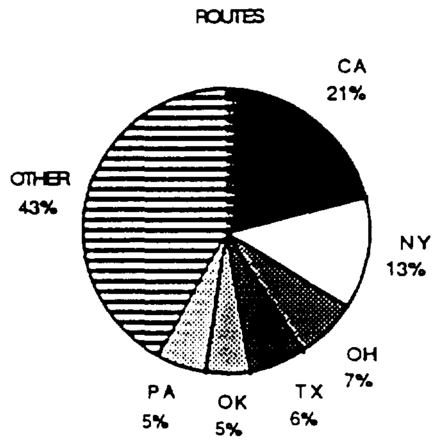


Table 3.2-1 Emission Characteristics of Largest 13 Networks

# of Networks	Designator	Bandwidth, MHz	Modulation
Seven	20000F9	20.0	FM
Two	20000F9Y	20.0	FM
One	19300F9	19.3	FM
One	20000A9Y	20.0	DSB-AM
One	25000F9	25.0	FM
One	9100A9	9.1	DSB-AM

3.2.2 Radiated Power and Transmitting Antenna Characteristics

A typical transmitter power for 12 GHz terrestrial networks is one watt. Transmitting antenna sizes range in diameter from 2 feet to 12 feet in 2 foot increments. The most widely used antenna size is 6 feet.

4.0 INTERFERENCE ANALYSIS

An analysis has been performed to illustrate the distance at which interference from all angles of a typical terrestrial transmitter will likely result in a total loss of DBS reception, "Case A," or a 20% DBS downlink outage increase at Los Angeles, Chicago and Miami, "Case B."

4.1 Loss of Signal Analysis Results (Case A)

The following sample computation shows that for a distance of 50 km to the horizon from the direct line of sight of a typical terrestrial transmitter, a subscriber will experience a complete loss of picture:

	DBS Transmission
Satellite EIRP, Los Angeles, dBW	50
Path Loss, dB	-206
Subscriber Antenna Gain, dB	34
LNB input power, dBW	-122

	Interfering Transmission
Power at LNB for C/I = 10 dB, dBW	-132
Subscriber antenna gain, dB	-14
Polarization Isolation, dB	-3
Path Loss, 50 km, dB	-148 dB
Interferring Transmitter EIRP, dBW	33 dBW
EIRP for 1W with 6 ft antenna, dBW (typical transmitter)	45 dBW

Figures 4.1-1 through 4.1-3 illustrate the distances from all angles of a typical terrestrial transmitter at which interference will cause loss of reception of the DBS signal. There are two cases for each city, one for the case of a subscriber antenna oriented to produce 0 dB of gain toward the terrestrial transmission and the other representing a gain of -14 dB toward the terrestrial transmission. Figure 4.1-4 provides a legend to figures 4.1-1 through 4.1-3.

The relative orientation of a particular DBS subscriber antenna and a terrestrial microwave path is entirely determined by their intended applications and cannot be modified to accommodate interference. Without regard to their relative orientation, the DBS subscriber antenna gain toward the interferer is always in the range 0 to -14 dB. Thus, figures 4.1-1 through 4.1-3 present the "best case" and "worst case" interference zones for a given terrestrial microwave link.

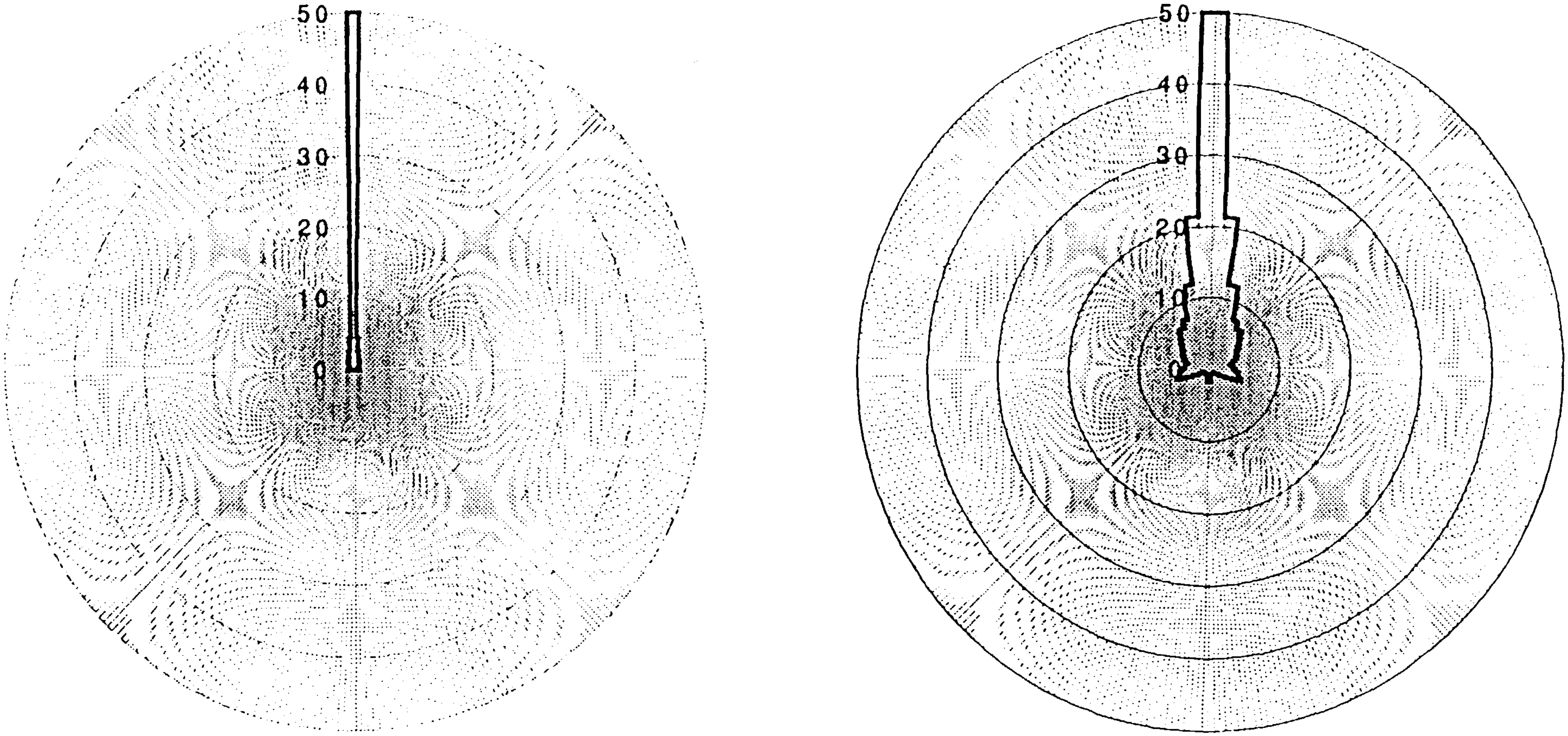
4.2 Outage Increase Analysis Results

Figures 4.2-1 through 4.2-3 illustrate the distances from all angles of a typical terrestrial transmitter at which interference will cause a 20% outage increase for a DBS subscriber. There are two cases for each city, one for the case of a subscriber antenna with 0 dB of gain toward the terrestrial transmission and the other representing a gain of -14 dB toward the terrestrial transmission. The distance computations include signal loss values based on the Crane rain attenuation model for both terrestrial paths and satellite slant paths. The following two tables illustrate a sample computation for Chicago:

Figure 4.1-1

Distance in km at which LA terrestrial transmission (from 1W transmitter and 6 ft antenna) causes loss of picture

for subscriber antenna gain of -14 dB | **for subscriber antenna gain of 0 dB**

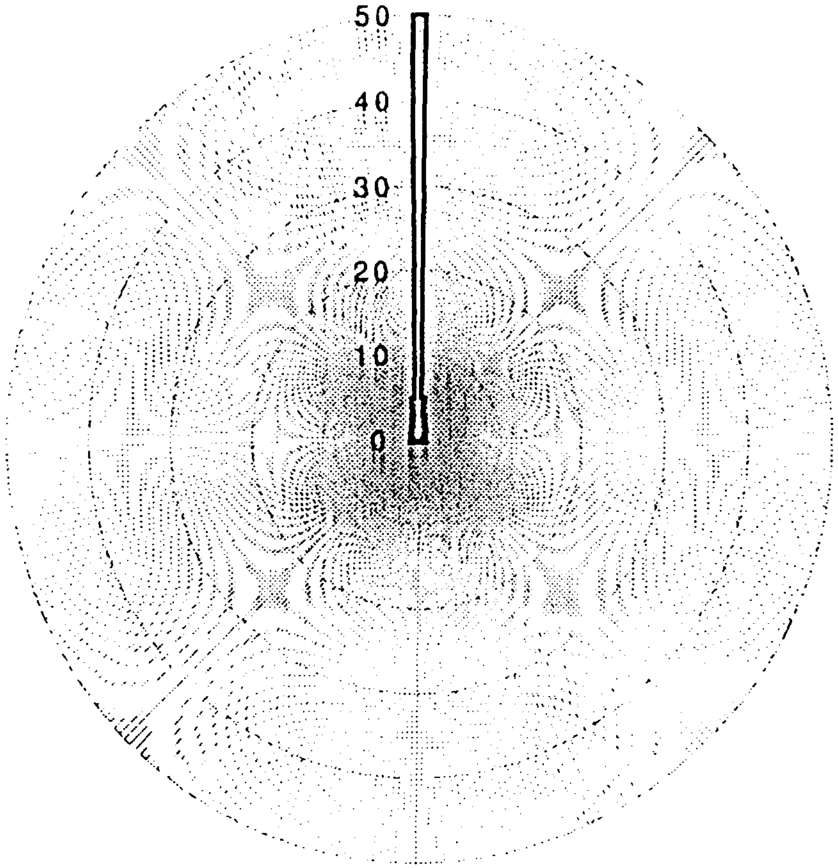


The diagrams above show an interference zone encompassing approximately 70 square kilometers for subscriber antenna gain of -14 dB, and 250 square kilometers for 0 dB. This means that within this zone, a DBS subscriber will be precluded from video reception.

Figure 4.1-2

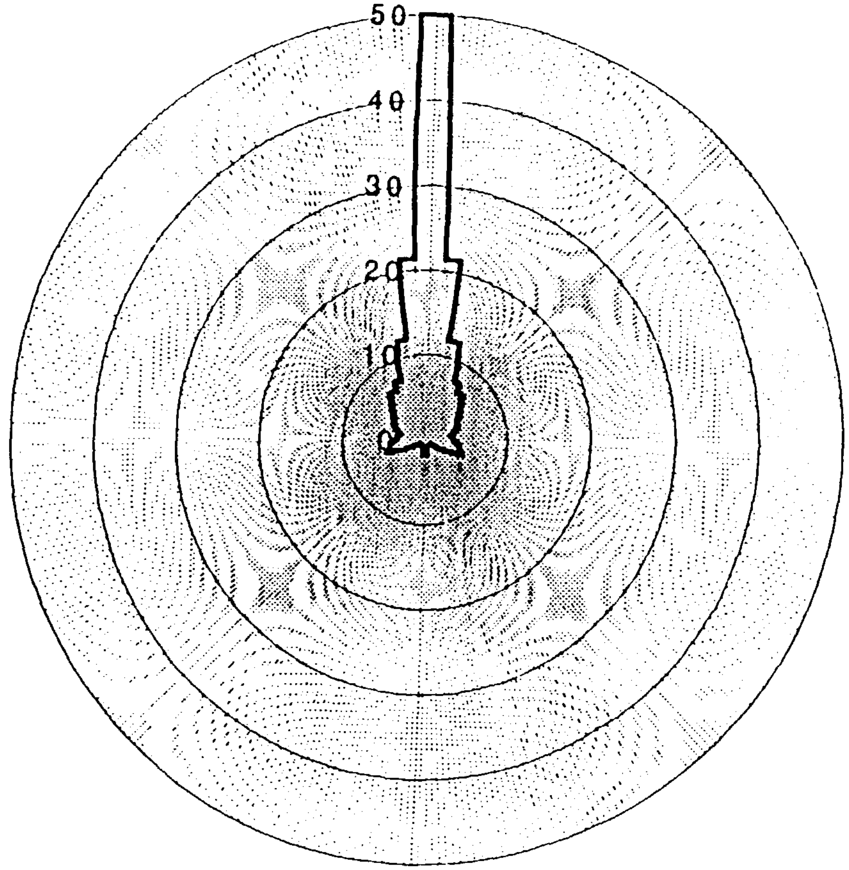
Distance in km at which Chicago terrestrial transmission (from 1W transmitter and 6 ft antenna) causes loss of picture

for subscriber antenna gain of -14 dB



Interference zone is 70 square kilometers

for subscriber antenna gain of 0 dB

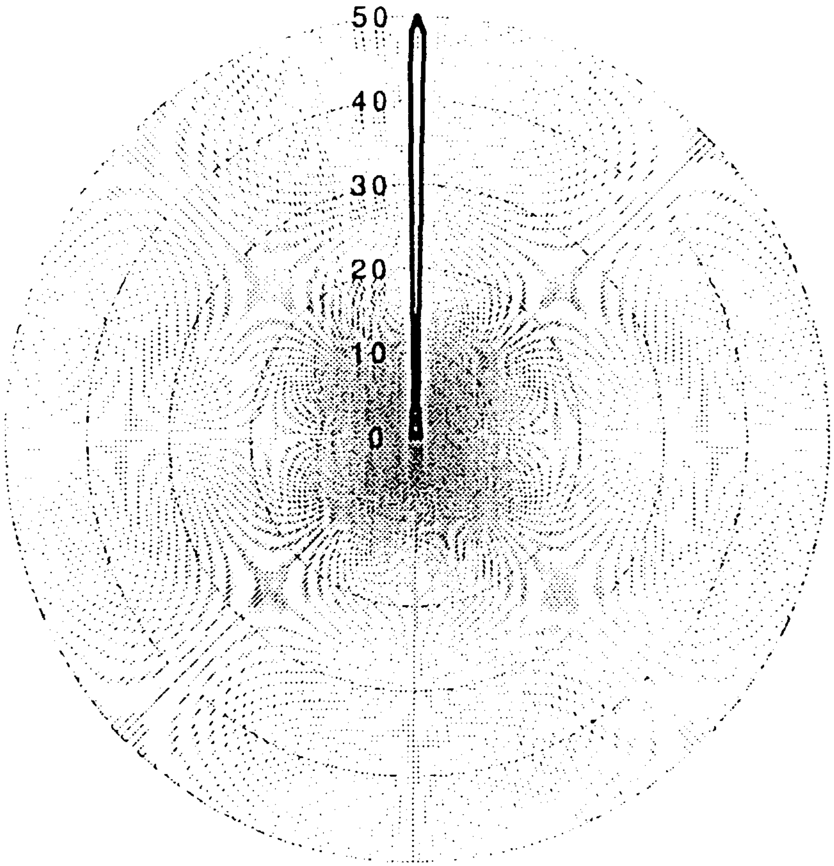


Interference zone is 250 square kilometers

Figure 4.1-3

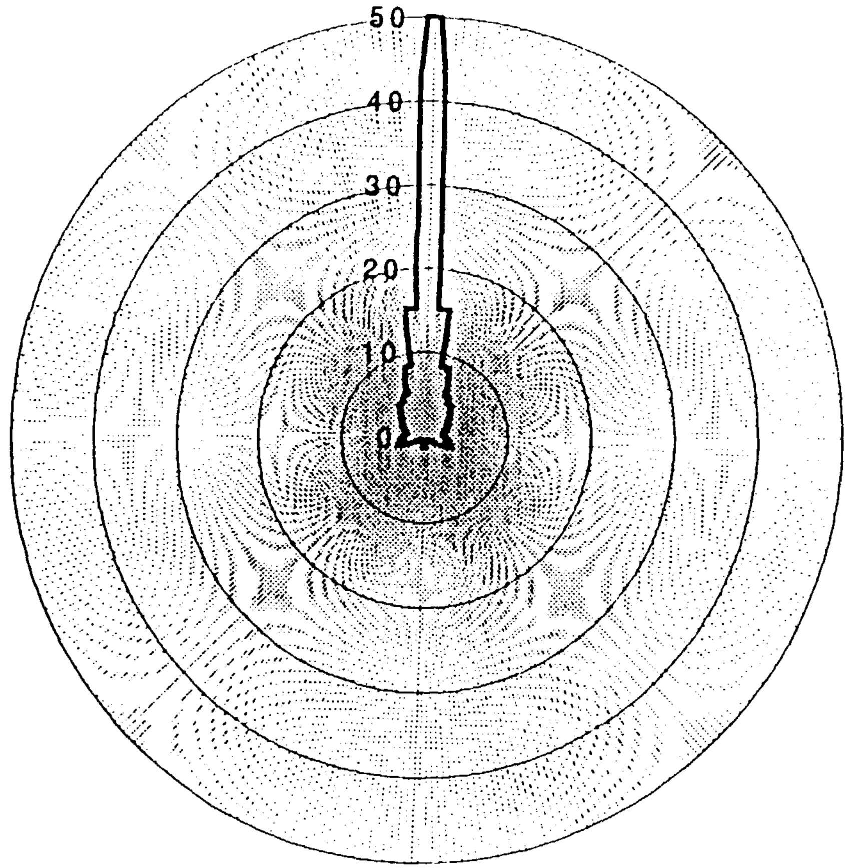
Distance in km at which Miami terrestrial transmission (from 1W transmitter and 6 ft antenna) causes loss of picture

for subscriber antenna gain of -14 dB



Interference zone is 60 square kilometers

for subscriber antenna gain of 0 dB



Interference zone is 170 square kilometers

Figure 4.1-4 How to Read the Bull's Eye Diagrams

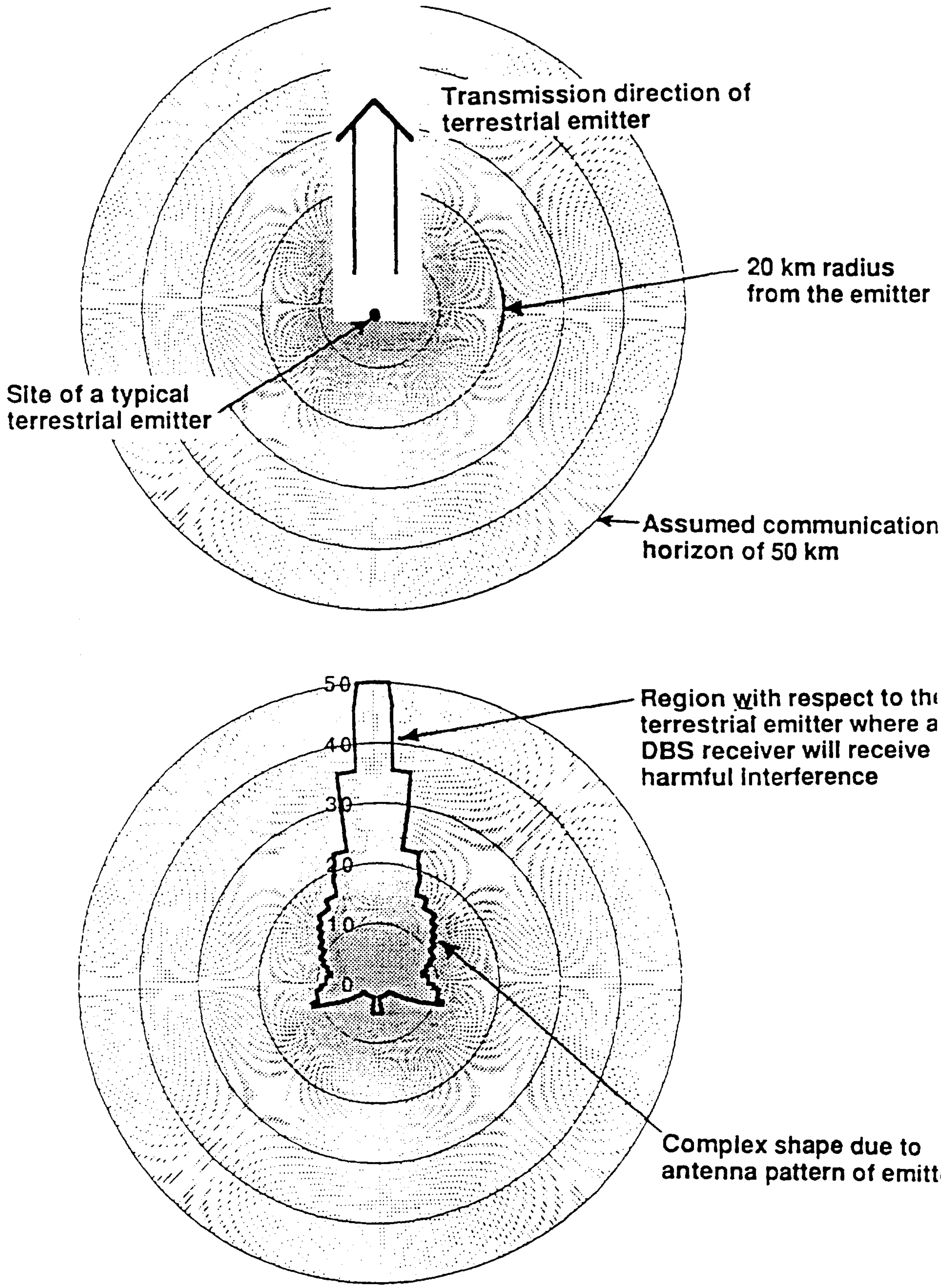
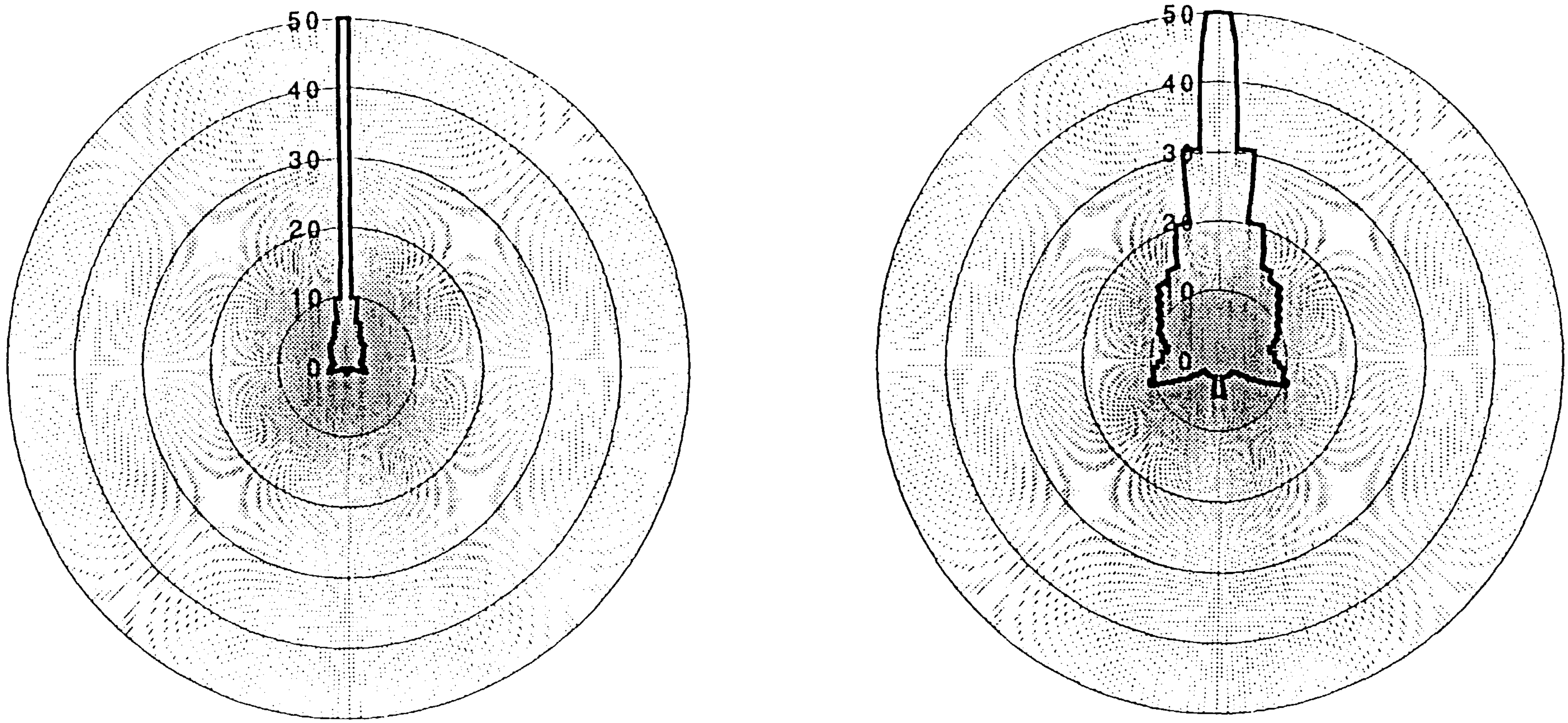


Figure 4.2-1

Distance in km at which LA terrestrial transmission
(from 1W transmitter and 6 ft antenna)increases subscriber outage from 0.1% to 0.12%

for subscriber antenna gain of -14 dB

for subscriber antenna gain of 0 dB



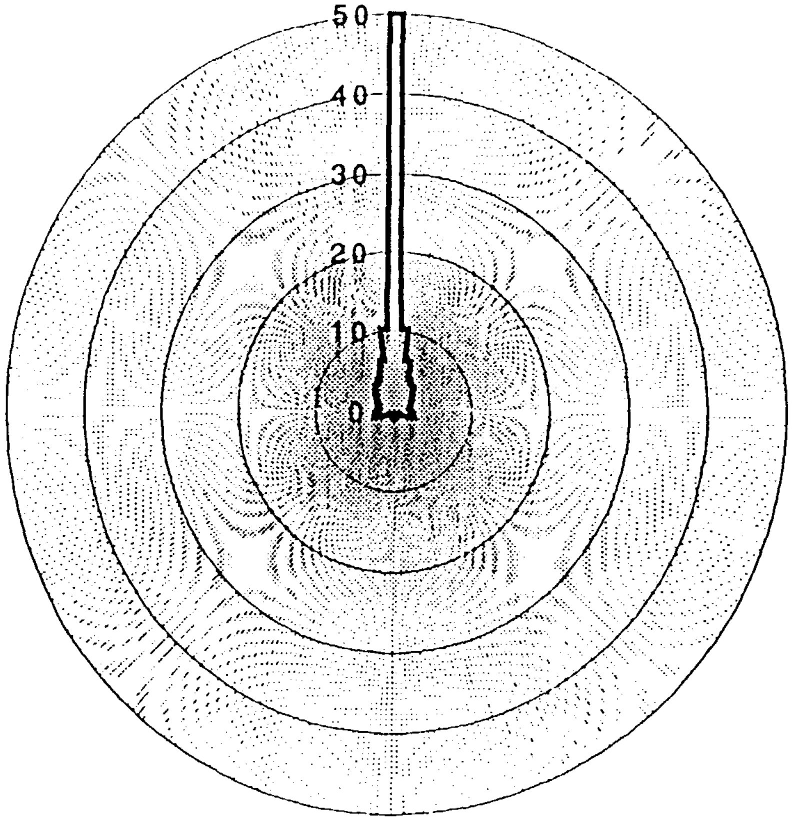
Interference zone is 110 square kilometers

Interference zone is 620 square kilometers

Figure 4.2-2

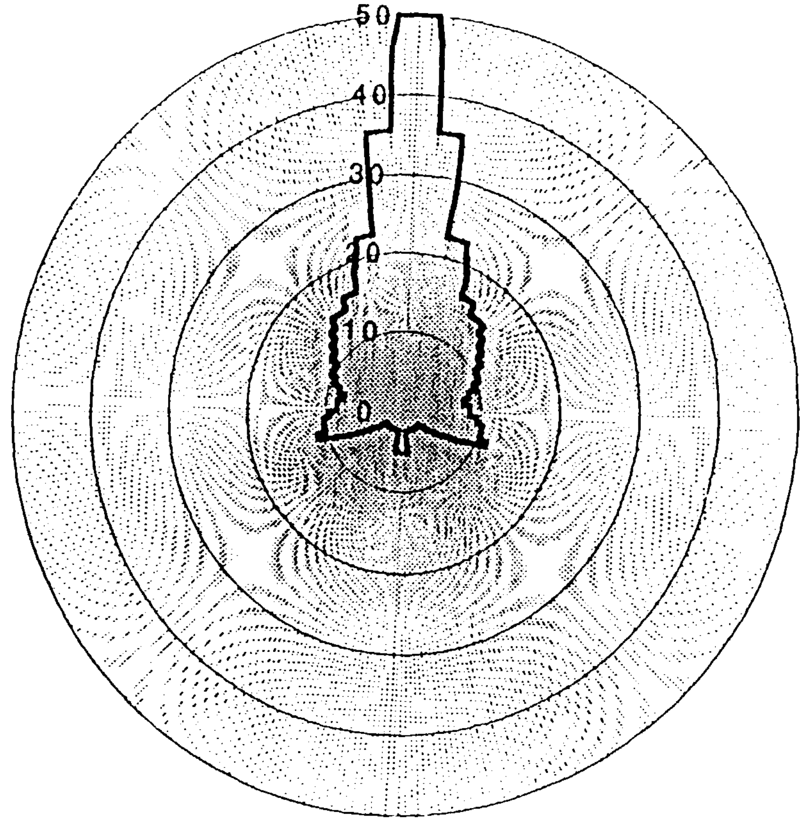
Distance in km at which Chicago terrestrial transmission (from 1W transmitter and 6 ft antenna)increases subscriber outage from 0.2% to 0.24%

for subscriber antenna gain of -14 dB



Interference zone is 100 square kilometers

for subscriber antenna gain of 0 dB

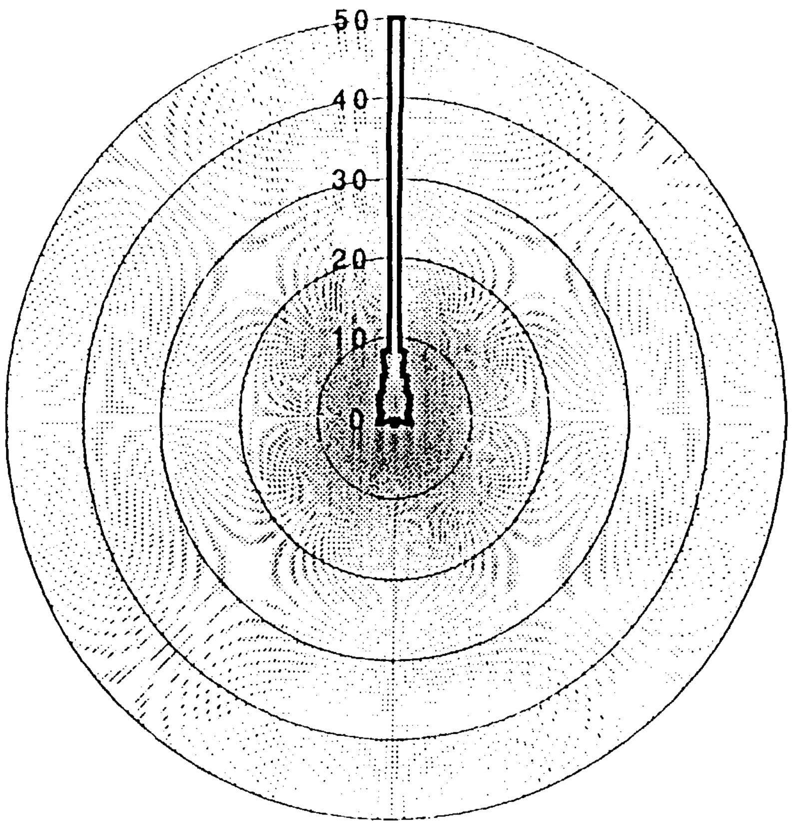


Interference zone is 500 square kilometers

Figure 4.2-3

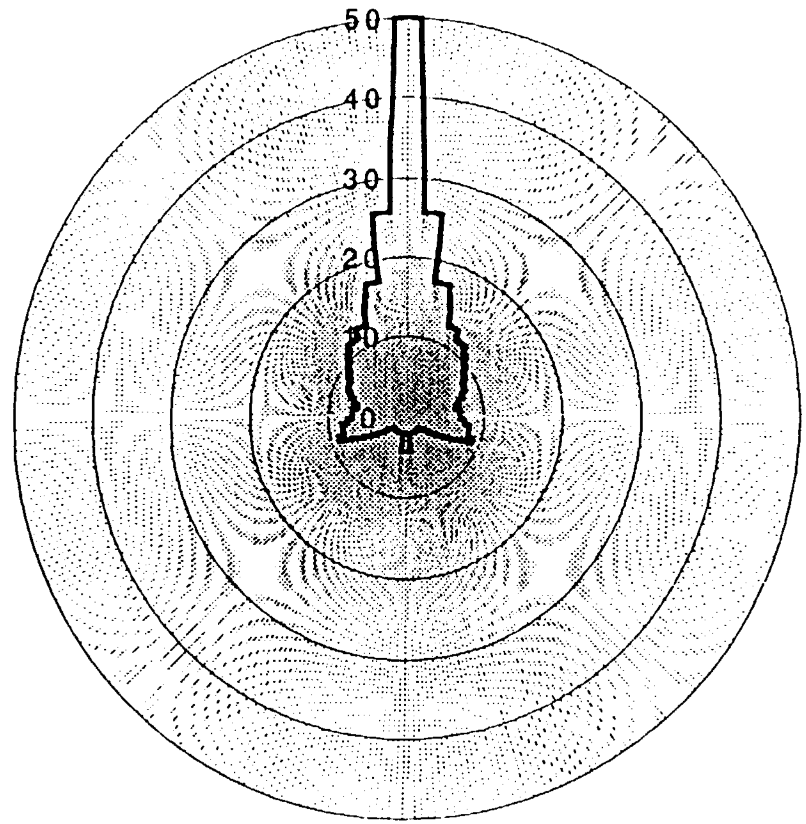
Distance in km at which Miami terrestrial transmission (from 1W transmitter and 6 ft antenna)increases subscriber outage from 0.3% to 0.36%

for subscriber antenna gain of -14 dB



Interference zone is 100 square kilometers

for subscriber antenna gain of 0 dB



Interference zone is 450 square kilometers

	DBS Transmission
Satellite EIRP, Chicago, dBW	51
Path Loss, dB	-206
Rain attenuation, dB	2 dB
Subscriber Antenna Gain, dB	34
Desired carrier LNB input, dBW	-123

A terrestrial carrier producing interference to the desired satellite carrier power will decrease the available satellite link C/N to an extent that less rain attenuation can be accommodated, with a consequent increase in satellite link outage. From computation using a link budget similar to that shown in Table 2.2-1 and the Crane rain model, a terrestrial carrier producing a C/I of 19 dB to the satellite link would increase the overall outage for Chicago locations by 20%. At the respective off axis angles from the terrestrial transmitter used in the table below, subscribers will experience a 20% reduction in availability at distances of 20 and 12 km:

	Subscriber at 2° Off Peak of Interfering Transmission	Subscriber at 4° off Peak of Interfering Transmission
LNB power for C/I = 19 dB, dBW	-142	-142
Subscriber antenna gain, dB	-14	-14
Polarization Isolation, dB	-3	-3
Path Loss; 20 km & 12.5 km, dB	140.5 dB	-136.3
Rain attenuation, dB	6.5 dB	4.7dB
Transmitter EIRP, dBW	22 dBW*	16 dBW*

*EIRP of 1 watt transmitter with 6 ft antenna at 2° & 4° off axis

4.3 Interference Amelioration

The interference levels computed above could be reduced by one of several methods as follows:

- Reduce interferer power levels
- Natural shielding
- Installed shielding

Since the interference power along the terrestrial route line-of-sight is well above that necessary to cause interference, reduction in emitter power must be quite substantial. Also shielding at the emitter site is not practical since a shield cannot be placed along the line-of-sight. Shielding at the DBS site is impractical in a consumer application since cost and convenience consideration preclude the custom engineering and installation work needed at each user location.

Natural shielding will occur and reduce interference levels but cannot be counted upon.

5.0 INTERFERENCE EXPERIMENTS

A measurement of susceptibility to terrestrial interference was performed in El Segundo at and near DIRECTV headquarters using actual television transmissions from the DBS-1 satellite. A 24 km link operated by the Southern California Metropolitan Transit Authority (MTA) passes along the ocean front between Rancho Palos Verdes and Venice beach. Figure 5.0-1 illustrates the experiment geometry. Figure 5.0-2 shows the transmit tower in Palos Verdes.

The center frequency and bandwidth of the MTA transmission are 12.27 GHz and 20 MHz. This is very similar to the center frequency and bandwidth of DBS transponder 4 which are 12.268 GHz and 24 MHz. The first measurement location at DIRECTV headquarters is about 5 km from the beam peak of the MTA transmission. The second, third and fourth measurement locations at Dockweiler State Beach, Washington State Beach and Will Rogers State Park are within the 3 dB or 10 dB beam widths of the MTA transmission. At Dockweiler Beach and Will Rogers Park, the interfering power is sufficient to cause loss of demodulator synchronization to DBS transmissions. Received C/(N+I) is less than 5 dB, well below the demodulator lock threshold at approximately 8 dB of C/N. At Washington State Beach received C/(N+I) is approximately -10 dB as illustrated by the spectrum analyzer trace shown in Figure 5.0-3. The photograph in Figure 5.0-4 illustrates the high density population area at which this measurement is taken. Figure 5.0-3 also shows that C/N levels on second adjacent transponders 2 and 6 are not impaired. However, it is expected that C/N and reception of video channels carried on first adjacent transponders 3 and 5 of satellite DBS-2 (to be launched summer 1994) will be significantly impaired. At DIRECTV headquarters 12° from beam peak, the MTA terrestrial transmission does not cause measurable degradation to the overall DBS link C/(N+I).

The following computation predicts the expected interference C/I at Washington State Beach to be -12 dB. This compares well to the measured C/I of -10 dB as shown in Figure 5.0-3.

	DBS Transmission
Satellite EIRP, L.A.	50 dBW
Path Loss	206 dB
Subscriber Antenna Gain	34 dB
Desired LNB Input Power	-122 dBW

	Interfering Transmission
MTA Xmitter EIRP, 2W with 6 ft. Antenna	48 dBW
Path Loss, 22 km	141 dB
Subscriber Antenna Gain	-14 dB
Polarization Isolation	-3 dB
Interfering LNB Input Power	-110 dBW

Ratio of desired carrier to interfering transmission (C/I) = -122 - (-110) = -12 dB.

Figure 5.0-1 Experiment Geometry

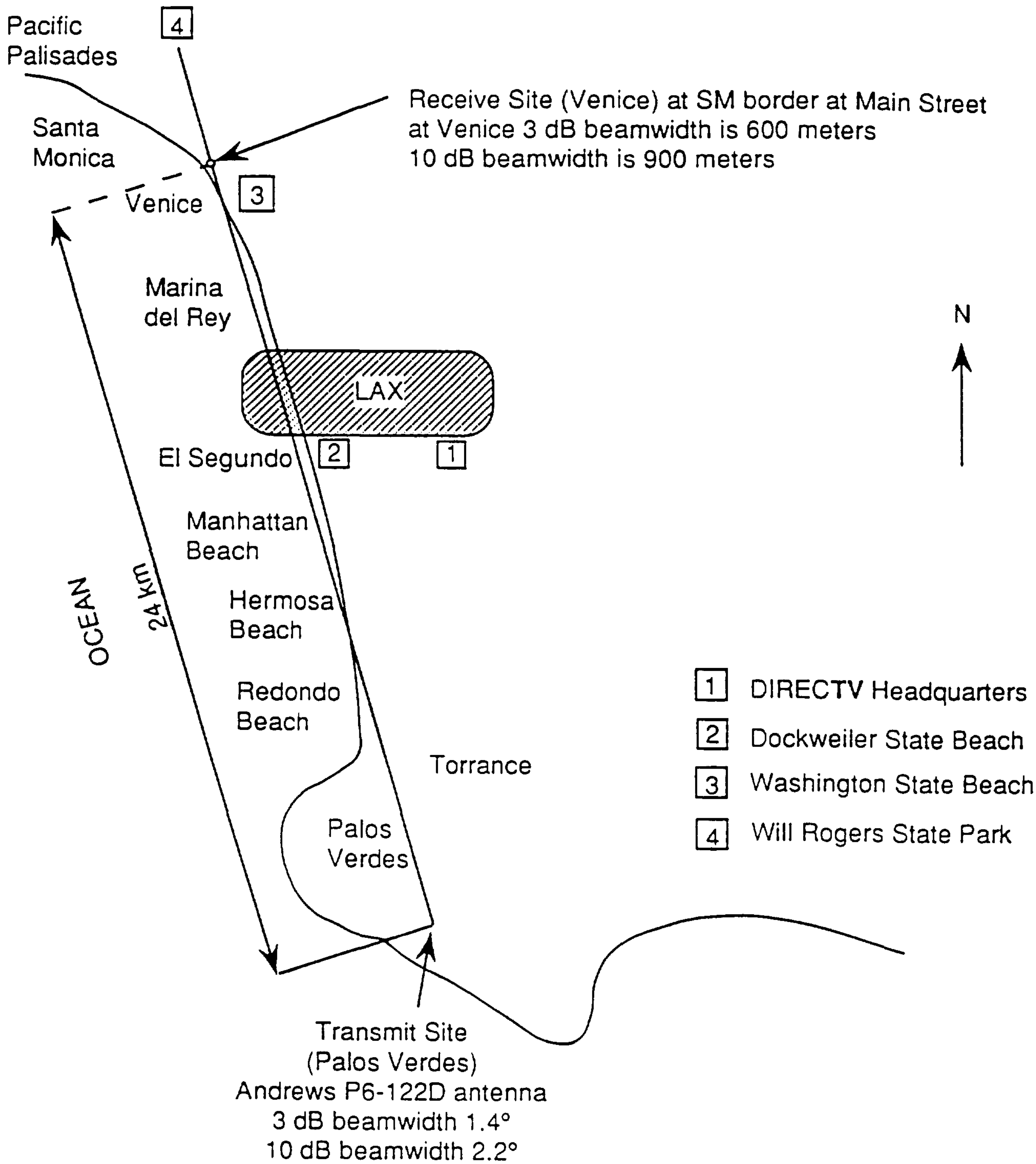


Figure 5.0-2 Photo of Palos Verdes Microwave Tower

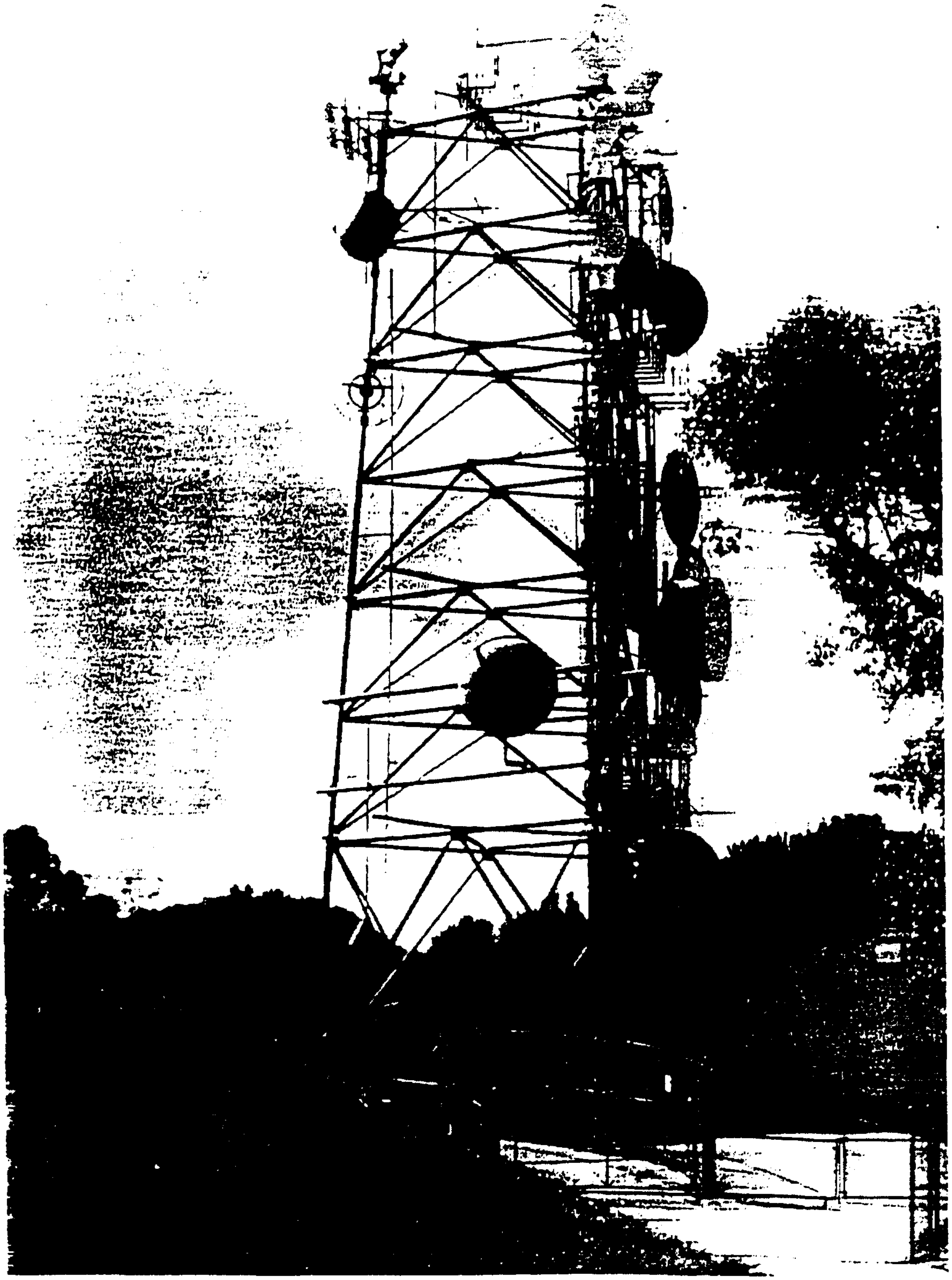


Figure 5.0-4 Photo at Washington State Beach

Subscribers living north of the Los Angeles airport and within 1000 meters of the MTA transmission will not receive any transponder 3, 4 and 5 video. Reception availability will be intermittent even with some natural shielding from adjacent buildings or trees. Subscribers outside 1000 meters but within 1600 meters (1 mile) of the beam peak will have significantly impaired or no reception of all video channels on transponders 3, 4 and 5.

The interference corridor is even larger for persons living south of the airport since they are closer to the terrestrial emitter's tower.

Cities and localities along this interference corridor include Torrance, Redondo Beach, Hermosa Beach, Manhattan Beach, El Segundo, Playa del Rey, Marina del Rey, Venice, Santa Monica and Pacific Palisades. A rough estimate of the population within the interference corridor is 60,000 persons. Assuming four persons per television household, the potential market for DBS in this interference corridor is 15,000 households.